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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/559,347	04/27/00	CHEN	Q 146712000400

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EXAMINER	
BERNATZ, K	
ART UNIT	**PAPER NUMBER**
1773	5

DATE MAILED: 09/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/559,347	Applicant(s) CHEN ET AL.	
	Examiner Kevin M Bernatz	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). 5 .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Amendments to the specification and claims 1, 4, 13 and 20, filed on July 9, 2001, have been entered in the above-identified application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Double Patenting

3. Claims 1 – 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 – 20 of U.S. Patent No. Chen et al. (U.S. Patent No. 6,120,890) in view of Ross et al. (U. S. Patent No. 6,143,375).

The above rejection is maintained for the reasons of record as set forth in Paragraph No. 2 of the Office Action mailed on April 9, 2001 (Paper No. 3).

Claim Rejections - 35 USC § 103

4. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al. ('441) in view of Ross et al. ('375).

The above rejection is maintained for the reasons of record as set forth in Paragraph No. 6 of the Office Action mailed on April 9, 2001 (Paper No. 3).

Regarding amended claims 4 and 13, the new embodiment encompassed by these claims is obvious for the reasons of record in view of the teachings of Ross et al. (Paragraph No. 6 of the Office Action mailed on April 9, 2001). With regard to the showing of unexpected results, the examiner agrees that Ross et al. fails to disclose the benefits seen by oxidizing the seedlayer. However, the benefits of oxidizing seedlayers is old in the art and therefor, the improvements shown in applicants' figures 4 and 5 would have been expected by one of ordinary skill in the art. See Chen et al. (U.S. Patent No. 5,733,370: Abstract; col. 1, lines 6 – 10 and 57 – 61; col. 2, lines 7 – 10; and col. 2, line 48 bridging col. 4, line 18) and Mahvan et al. (IEEE Trans Mag., vol. 29(6), 1993, 3691: Abstract; Figures 1 – 3; Section III. Experimental results).

5. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al. in view of Ross et al. as applied to claims 1 and 10 above, and further in view of Okumura et al. ('733).

The above rejection is maintained for the reasons of record as set forth in Paragraph No. 7 of the Office Action mailed on April 9, 2001 (Paper No. 3).

Examiner Comments

6. The examiner wishes to clarify a possible misunderstanding stated in applicants' remarks. The examiner did not state that the incorporation of the limitations of claims 3 and 4 into claim 1 would make the claim allowable, merely that it would appear to be adequate to overcome the Ross et al. reference which fails to recognize the results

shown in Figures 4 and 5 of applicants' disclosure. At the time of the interview, the results shown in Figures 4 and 5 were deemed unexpected based on the references of record. However, upon further searching, the improvement shown in applicants' Figures 4 and 5 were deemed to be known to one of ordinary skill in the art, and hence ***not*** unexpected (see Response to Arguments section, below).

Response to Arguments

7. The rejection of claims 1 - 20 under 35 U.S.C § 112 – 2nd Paragraph

This rejection has been overcome via applicants' amendments and arguments.

8. The rejection of claims 1 - 20 under 35 U.S.C § 103(a) – Takeuchi et al. in view of Ross et al.

Applicant(s) argue(s) that the limitation "the sealing layer substantially prevents migration of Li from the substrate" is a patentably distinct limitation and, as such, is not taught by either reference. The examiner respectfully disagrees.

The applicants are reminded that limitations that merely recite what a product will do rather than what they are have been held to be indefinite and/or provide little or no weight in determination of patentability over the prior art since these limitations are not further limiting in so far as the structure of the product is concerned (*Ex parte Slob*, 157 USPQ 172, 1968). In the instant case, applicants' are merely reciting what the layer does, i.e. "prevents migration of Li from the substrate", and as such this limitation is given little or no weight in determining patentability since it is not further limiting in so far

as the structure of the medium is concerned. Furthermore, the record already states that Ross et al. disclose NiP and NiNb layers as being able to prevent impurities from reaching the magnetic layer.

Applicants further argue that Ross et al. does not disclose NiNb as having a protective benefit. The examiner respectfully disagrees.

Applicant(s) are reminded that the rejection is based on the entire reference(s) and not just a piece meal analysis of the cited reference(s). In the instant case, Ross et al. disclose the equivalents of NiP and NiNb as seed layers of their disclosed invention. While Ross et al. does not explicitly state that NiNb also exhibits the protective property of NiP, the fact that Ross et al. disclose the equivalence of these two materials clearly indicates to one of ordinary skill in the art that NiNb would function equivalently to NiP in terms of protecting the magnetic layer from impurities.

Applicants further argue that the Ross et al. NiP layer is outside the thickness of applicants' claimed range limitation. The examiner respectfully disagrees.

The examiner believes applicants' have the two Ross et al. references mixed up. The '375 reference is relied upon for the 103(a) rejection and clearly states encompassing thickness values for the NiNb layer ('375, col. 7, lines 24 – 34).

Finally, applicants further argue that there is no motivation to combine the teachings of Ross et al. with the disclosure of Takeuchi et al. and that one of ordinary skill in the art would apparently not know the benefits of seed layers. The examiner respectfully disagrees.

Applicant(s) are again reminded that the rejection is based on the entire reference(s) and not just a piece meal analysis of the cited reference(s). In the instant case, as stated in Paragraph 6 of the Office Action mailed April 9, 2001 (Paper No. 3), NiNb seed layers are taught by Ross et al. to provide an easy medium for texturing, in addition to prevention of impurities from migrating to the magnetic layer (Ross et al., '375, cols. 1 – 3).

9. The rejection of claims 8 and 17 under 35 U.S.C § 103(a) – Takeuchi et al. in view of Ross et al. and Okumura et al.

Applicant(s) argue(s) that Okumura et al. does not teach a NiNb ***sealing*** layer. The examiner respectfully disagrees.

An invention may be obvious if the prior art has different reasons for doing what the applicant has done. "It has long been held that a rejection under 35 USC 103 based upon a combination of references is not deficient solely because the references are combined based upon a reason or technical consideration which is different from that which resulted in the claimed invention." *Ex parte Raychem Corp.* 17 USPQ 2d 1417, 1424 (BPAI 1990). Cites *In re Kronig* 190 USPQ 425 (CCPA 1976); *In re Gershon* 152 USPQ 602 (CCPA 1967). See also *In re Beattie* 24 USPQ 2d 1040, 1042 (Fed. Cir. 1992); *In re Wiseman* 201 USPQ 638 (CCPA 1979); *In re May* 197 USPQ 601 (CCPA 1978); *In re Lintner* 173 USPQ 560, 562 (CCPA 1972); and *In re Tomlinson* 150 USPQ 623 (CCPA 1966). In the instant case, Okumura et al. teach adding encompassing elements for improving flatness, coercivity and ease of manufacture, all of which would

be desired improvements for magnetic recording media. The fact that the NiNb layer would also function as a sealing layer is not patentably relevant since it is merely an intended use/"what the product will do" limitation and is given little or no weight in determining patentability since it is not further limiting in so far as the structure of the medium is concerned.

Finally, applicants argue that Ross et al. disclose a textured NiNb layer and the teaching of improved flatness by Okumura et al. teaches away from the proposed combination. The examiner respectfully disagrees.

The examiner again reminds applicants that the rejection is based on the entire reference(s) and not just a piece meal analysis of the cited reference(s). In the instant case, Ross et al. clearly states that the layer to be textured ***must*** be smooth prior to laser texturing (col. 1, lines 51 – 61). It would therefor have been obvious to increase the flatness of the deposited NiNb layer since a flat, smooth layer is necessary for the Ross et al. invention.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (703) 308-1737. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-6078 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

KMB
September 13, 2001

STEVAN A. RESAN
PRIMARY EXAMINER